

# Spaceport News

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## Shuttle displays convey lasting tribute

Throughout history, art always seems to inspire emotion. But in Shuttle Launch Director Mike Leinbach's office overlooking Firing Room 4 of the Launch Control Center, his emotions have inspired several beautiful works of art.

With the end of the Space Shuttle Program approaching, Leinbach came up with an idea in February to honor the final flight of Atlantis, Discovery and Endeavour.

"The original idea was to unveil something after the last launch of each vehicle in Firing Room 4," Leinbach said. "I personally wanted them in there because of the teams



NASA/Jim Grossmann

Five shuttle tributes currently are on display in Firing Room 4 of the Launch Control Center at Kennedy Space Center. Above the space shuttle countdown clock, from left and the order in which they arrived to Kennedy, are Columbia, Challenger, Discovery, Atlantis and Endeavour.

I've worked with as launch director throughout the last 10 years. It means a lot to me to have them there."

With the help of Management Support Assistant Amy Simpson,

designing the first display began in April. The plan was to get Atlantis' tribute up before its final scheduled launch.

"The graphics people went from concept to design quickly,"

Leinbach said. "They put their heart and soul into it. It's so unique to each processing team."

Designs for the first was a 2-foot-by-3-foot piece of work, but the size eventually grew to 5 by 7 feet. The displays couldn't be too heavy, so they are made of foam board and held up with Velcro. Each shuttle is a separate piece, which makes it three-dimensional.

Atlantis' display was completed May 7; the spacecraft launched May 14 and landed May 26.

"We did Atlantis separately

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## Guards watch over Discovery during final rollover

By Rebecca Sprague  
Spaceport News

Nearly every Hollywood celebrity has at least one bodyguard on their payroll. At any given time, NASA's three space shuttles have about 80.

Officially called access control monitors and orbiter integrity clerks, the "guards" make sure the shuttles are

safe and secure in Kennedy Space Center's orbiter processing facilities, the Vehicle Assembly Building, on the launch pads and when they're on the move.

The most recent journey took place the morning of Sept. 9 when shuttle Discovery rolled over from Orbiter Processing Facility-3 to the Vehicle Assembly Building, where it was later connected

to its external fuel tank and solid rocket boosters for the STS-133 mission to the International Space Station.

Midway, the spacecraft paused for a few hours to allow space center workers to snap photos. Dressed in jeans, sneakers and blue United Space Alliance (USA) collared shirts, Discovery's guards stood watch about 50 feet away.

"Obviously, people like to get as close as they can, so we have to maintain some sort of control," said USA's Omar Izquierdo, who specifically is designated to guard Discovery. "We have a list of who gets to be how close and then we control that."

Dolly Hoggard began working with USA as a shuttle guard about eight years ago and remembers

one of her first missions as an orbiter integrity clerk.

"I was the last one on the pad on launch day after we left the aft end, and knowing that we helped launch that bird and then bring it home safe just made me feel so prideful," Hoggard said.

As Hoggard looked up

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# Tom Joyner reunion in Orlando empowers families

By **Steven Siceloff**  
*Spaceport News*

**N**ASA's education specialists from across the country joined a Labor Day weekend event hosted by radio host Tom Joyner in Orlando, Fla., to tout the benefits of math and scientific learning along with opportunities offered by the space agency.

Astronauts and STS-129 crewmates Leland Melvin and Mike Foreman were joined by actress Nichelle Nichols, who played Lt. Uhura in the original "Star Trek" series, for the event. The trio, joined by other notables, encouraged students to learn scientific, technology, engineering and math skills.

"To all the kids in here who want to be ballplayers, musicians, rappers, whatever you want to be, go for it," Melvin said. "But make sure you have the knowledge in your head, so if that doesn't work out you can do or be your backup plan."

Melvin, who played wide

receiver in the NFL before an injury ended his football career, noted that his backup plan was to become an astronaut, something he couldn't have done without a quality education.

They signed autographs, spoke with students and parents one-on-one and conducted a panel Sept. 5 to stir interests and excitement as part of NASA's "Summer of Innovation" initiative.

The students and parents also got to take part in science projects, such as building a balloon-powered rocket and launching it up a string. They also tried assembling blocks using bulky gloves similar to the ones astronauts use.

"The Tom Joyner Morning Show Family Reunion was an outstanding event," said Hortense Burt, chief of Education and University Programs at Kennedy Space Center. "Thanks to Tom Joyner and his unique style of bringing education and world knowledge to the African-American

community, there are now thousands of people who know about and have actually met NASA astronauts, legends and trailblazers."

For those who might have been deterred by the thought of becoming an astronaut, but who still want to work for the agency, Melvin said there is plenty of room at NASA for skilled people.

"Whatever you want to do, whatever you want to be with your life, there's a job for you at NASA,"

Melvin told students during a Web chat.

The Tom Joyner Morning Show Family Reunion was held at the Gaylord Palms Resort and Convention Center in Orlando. More than 14,000 people were estimated to have attended. The event featured singers, including "American Idol" winner Fantasia Barrino and other rhythm and blues singers. Tom Joyner hosts a nationally syndicated radio program.



NASA/Amanda Diller

Astronaut Leland Melvin, a veteran of two spaceflights, signed autographs for visitors to the Tom Joyner Morning Show Family Reunion on Sept. 5 as he told them about space and scientific education benefits.

## Petro shares top 10 leadership qualities

By **Linda Herridge**  
*Spaceport News*

**T**he top 10 qualities of a good leader was the focus of this month's Leadership Lunch, with Kennedy Space Center Deputy Director Janet Petro, Sept. 10, at the Kennedy Learning Institute.

"This is going to be an interactive program," Petro told an audience of NASA and contractor supervisors, leads and other workers interested in this topic. "I'm going to learn as much from you today, as I'm going to teach you."

Petro said that leadership starts at the supervisory level and communication is a key quality.

"A first-line supervisor has the greatest impact on our work force," Petro said.

"First, a good leader should have a clear vision

and be able to articulate it or put it into action," Petro said. "A leader has to be passionate about that vision."

Secondly, Petro said there should be trust or integrity to do the right thing.

"Integrity is doing the right thing when no one is looking. With my background, I have a definite bias toward integrity," Petro said. "It is very difficult to trust anyone who has not been truthful."

Dedication is another important quality. By setting the example, leaders can show the team their dedication. "A good leader inspires by example," Petro said.

She said a good leader should have magnanimity, or the ability to give credit where credit is due.

Humility and openness also are good qualities. "Openness is the ability to

listen to new ideas, even if they do not conform to the usual way of thinking. Creativity, or the ability to think differently or go outside of the box, is essential for leaders," Petro said.

It's also important to be fair in dealing with others, display assertiveness and have a sense of humor.

Attendees contributed their thoughts on other qualities of a good leader, including being decisive, competent, empathetic or compassionate, and possessing the ability to learn from mistakes. They agreed that making a decision is better than no decision at all.

"Being a mentor to someone also is very rewarding," Petro said. "Leaders need to help others out by being mentors. It is a good feeling to mentor someone, and you learn a lot for the experience."

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and admired Discovery, she asked, "How many people in the world get to do this? We're the only people in the world working with shuttles."

It's not just about protecting the shuttles' exterior, though. Izquierdo said it's their job to make sure once in space, there isn't anything floating around inside that would affect an astronaut's safety or work.

"We monitor people going in and out of the ship and make sure everything they take in, they bring out," Izquierdo said. "We help maintain a clean environment in the crew module, the aft compartment . . . basically we monitor all of the interior compartments."

USA's Carl Crockett, who is assigned to protect shuttle Endeavour, and Garner Goodwin, who monitors all of the shuttles while

working third shift, said their team checks badge numbers, keeps an eye on the chemicals going in and out as well as high bay doors that open and close.

"We want to make sure that there's enough oxygen in the ship for the people going inside to work because we have a lot of hazardous chemicals out here," Hoggard said. "We have lives at stake and that's what makes our job so important."

Discovery's NASA Vehicle Manager Jennifer Nufer said, "It's important to maintain a secure perimeter around the vehicle, monitor who is authorized to be in and around it, and who is where in relation to space-flight hardware . . . so these folks perform a very critical job for America's space program."

Hoggard echoed that sentiment, "All of us put our hearts, minds and souls into these birds every day."



# Speakers Bureau training voices strong message to volunteers

By Linda Herridge  
Spaceport News

Fielding questions such as, “Why does the Earth rotate?” or “Have you ever seen an alien?” come with the territory for Kennedy Space Center Speakers Bureau volunteers Gabe Gabrielle and Martin Boyd.

Gabrielle, an engineer with United Research Division, recently gave a presentation about NASA’s space program to a group of fourth- and fifth-grade students at Windy Ridge Elementary School in Orlando, Fla.

“I seem to have a magical connection with kids,” Gabrielle said. “I never get tired of sharing the excitement about NASA with an audience.”

Gabrielle and Boyd were among about 50 NASA and contractor workers who attended a Speakers Bureau workshop, Sept. 1 at the

Kennedy Learning Institute. They signed up for future workshops to learn more about the Kennedy Educate to Innovate Program, or KETI, and received updated speaker resources.

Speakers Bureau Project Coordinator Amanda Griffin, with ReDe Critique, said the program has been revamped and features new presentation and outreach material.

“The number of speakers going out has nearly doubled in the past year, so it is paramount that we have a resource of trained, prepared speakers who can go out into the community and inspire others when called upon,” Griffin said.

During the workshop, Griffin explained how Speakers Bureau requests are received, sent out to the volunteer speakers and then tracked. The center’s Assistant Chief Counsel Sariah Adams gave a brief overview of do’s and don’ts from a government and legal perspective.

Dina Davila, KETI project manager, talked about the new initiative that will utilize the work force to inspire students to pursue careers in science, technology, engineering and mathematics.

“KETI will provide the training, materials, hands-on activity kits and additional opportunities for the Kennedy work force to contribute to educational outreach, such as assembling activity kits, assisting with presentation development, participations in the Digital Learning Network, and more,” Davila said.

The first three activity kits focus on robotics, rocketry and aeronautics, with more kits in the works.

Davila said KETI supports the agency’s education initiative, “Summer of Innovation” and the President’s education campaign, “Educate to Innovate.”

Russell Romanella, Kennedy’s associate director for engineering and technical operations, discussed

best practices and gave an example of one of his speaker presentations.

“It’s easy to get kids excited about space travel,” Romanella said. “Tell them something that makes them go ‘wow.’”

Gabrielle said his first speaking engagement was an unofficial presentation in 2006, to a group of 500 students and teachers in a school in South Africa. Since then, he estimates he’s spoken to more than 15,000 children in Florida, Georgia, Missouri, North Carolina and New York. At one point he carried out six presentations in one day and knew that he was on to something.

“I always want to keep my presentations up-to-date,” said Boyd, who is an engineer in the center’s Engineering Directorate. “Most people don’t know what we really do and they are very surprised when they learn how much of what we accomplish affects their everyday lives.”

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first and that went over really well,” Leinbach said

Leinbach and Simpson decided to put the final four displays up at once so workers could enjoy them as the final launches take place. The art for Columbia, Challenger, Discovery and Endeavour went up the last week of July. The displays are on the wall above the shuttle countdown clock in the order of their delivery date.

“They represent every-

body who has contributed to the Space Shuttle Program, especially here at Kennedy Space Center, throughout the last 30 years,” Leinbach said. “I have a very, very close, personal relationship with those orbiters. And that may sound funny, but the people who work on the vehicles know exactly what I’m saying.

“We end up loving the vehicles as much as we love the crews. It’s hard to explain to the public, but everyone who reads this will understand

what I’m saying.”

Five replica posters are on Firing Room 4’s north wall. Each gives a brief description of the artwork and contains information that couldn’t be represented in the display.

Leinbach asked the three orbiter flow directors what they wanted to do with their final launch and coordinated their ideas for each display with two graphic artists, Amy Lombardo and Lynda Brammer of Abacus Technology Corp. Lombardo designed four

of the five displays. Brammer handled the Challenger piece.

“These were the first displays I have ever created,” Lombardo said. “I wanted to meet the standards and expectations set by my coworkers, particularly those of Lynda Brammer. Her beautiful work graces walls across the center and I hoped that my work would measure up.”

The tributes already have received accolades. As recently as Sept. 7, the Endeavour image was

NASA’s Image of the Day. The excitement the displays have drawn has come from around the world.

“We knew they were going to be popular, but we had no idea how well they were going to be received,” Leinbach said. “I’ve gotten calls and e-mails from every center . . . friends I’ve made throughout my career. It’s pretty neat.

“I hope they remain in Firing Room 4 forever. It will be a lasting tribute to the orbiters and the processing teams.”

## Shuttle tributes available for download

### Columbia



<http://mediaarchive.ksc.nasa.gov/detail.cfm?mediaid=48497>

### Challenger



<http://mediaarchive.ksc.nasa.gov/detail.cfm?mediaid=48496>

### Discovery



<http://mediaarchive.ksc.nasa.gov/detail.cfm?mediaid=48498>

### Atlantis



<http://mediaarchive.ksc.nasa.gov/detail.cfm?mediaid=48495>

### Endeavour



<http://mediaarchive.ksc.nasa.gov/detail.cfm?mediaid=48499>



# Scenes Around Kennedy Space Center



NASA/Jack Pfaller

Technicians cover the hatch of the Permanent Multipurpose Module (PMM) with insulating blankets to protect it and its contents from the harsh environment and temperatures of space in Kennedy's Space Station Processing Facility on Sept. 1.



NASA/Charisse Nahser

Fifth- through eighth-grade students and their parents attend the last NASA Family Education Night event at the Astronaut Hall of Fame on Aug. 28. Activities included "gee-whiz" presentations, astronaut appearances, a hovercraft, vortex cannon and alternative fuel vehicles, which promote science, technology, engineering and mathematics (STEM) education.



NASA/Jack Pfaller

A large yellow, metal sling lowers shuttle Discovery to its external fuel tank and solid rocket boosters in High Bay 3 of the Vehicle Assembly Building on Sept. 10 in preparation for its targeted STS-133 launch Nov. 1.



NASA/Randy Beaudoin, VAFB

The Taurus XL rocket's first, second and third stages are prepared at Vandenberg Air Force Base in California on Sept. 9 for their first flight simulation, which will include testing voltages, currents, pressures, temperatures and thruster firings. The four-stage rocket will carry NASA's Glory satellite into low Earth orbit, Nov. 22, to study aerosols and black carbon.



NASA/Jack Pfaller

STS-133 Mission Specialists Tim Kopra, left, and Alvin Drew inspect a payload component as Mission Specialist Michael Barratt and Pilot Eric Boe look on during a Crew Equipment Interface Test (CEIT) in Kennedy's Space Station Processing Facility on Sept. 2.



# Backpack, communications network face desert test

By Steven Siceloff  
Spaceport News

Science experiments don't always involve bubbling beakers and people dressed in lab coats and goggles. In the case of NASA's Desert RATS project, an experiment can look like a plastic box bolted to a backpack frame and be carried around the Arizona desert for a month.

Inside the plastic box is a host of off-the-shelf electronics capable of telling the backpacker his location, letting him talk to distant colleagues and beaming pictures of notable objects to geologists and other scientists.

"The backpack tells you where you are, where you were and it allows you to communicate and share your experience with someone in a different location," said Marc Seibert, a senior research engineer at Kennedy Space Center. "This backpack has been dreamed about for 10 years."

The backpack is an important part of Kennedy's role in the Desert Research and Technology Studies (RATS) project, which is set up as a large-scale experiment to find out what equipment and operations scenarios NASA needs to explore the surface of an alien world, such as an asteroid, the moon or Mars.

A team of astronauts, scientists and engineers from several NASA centers head to Arizona's desert each year to simulate the unique environment of space explorers.

Kennedy's engineers develop the communications, navigation and data transmission networks needed, a task that includes a semitrailer set up as a mission operations center, a command vehicle, a specialized RV, a pair of

Humvees plus enough communications gear to set up a wireless network for a small crew of explorers to talk back to "Earth" like they would from other planets.

Equipment from other NASA centers, such as a pair of large rovers, has to work on the same communications network. The rovers, for example, relay the signals from the backpacks to the mission operations center.

Although the area they test in is not a perfect stand-in for the moon or Mars in terms of having breathable air and normal gravity, the site does a pretty good job of isolating the participants, said Mike Miller, communications research engineer at Kennedy.

"We have to take everything to the site, just like we will to other planet surfaces," Miller said.

The research program began 13 years ago, and grows in complexity with each annual run. The 2010 program is focused largely on seeing how effectively astronauts can explore a foreign surface under different communications scenarios and rover modes of operation. It also will put pressure on the scientists to have daily plans ready when the explorers awake each day. That means long nights of studying the day's findings to find out what should be done the next.

"This is probably the highest fidelity lunar simulation that's ever been done," Seibert said.

The backpack carries a pair of cameras, a GPS antenna to pinpoint location and all the electronics needed to store then transmit information. The person wearing the backpack controls its systems using an electronic wrist display, supplied by NASA's Glenn Research Center in Ohio, that

is generations ahead of the flip cards Apollo astronauts used during the first trips to the moon. Researchers also will test an iPod Touch from Johnson Space Center in Houston.

Right now, the backpack and its host of attached gear only has to stand up to the winds and heat of a desert on Earth.

"Environment is a big thing out there," Miller said. "The winds are very high, it gets very hot. We are pretty much out in the middle of nowhere."

Designers don't have to worry just yet about the life support systems that would be required for any astronaut working on another world. The life support functions will be incorporated into the backpacks as they evolve and improve. Other parts of the backpack design will be incorporated into the rover so the astronauts can quickly leave the vehicle for a spacewalk.

Miller said the month-long exercise should show them whether the design works technically and what can be improved.

"Success would be to have all the systems up and working, for the scientists to get the science data and the test team to meet their objectives," Miller said.

Miller and his team were given the backpack assignment only a couple months before the equipment had to be assembled and shipped out.

"We only had two to three months here for everything, the design and building, getting the parts, everything," Miller said as others on his team put the finishing touches on a couple of backpacks.

With the short time frame, Miller said his group worked with partners at Glenn Research Center and

with off-the-shelf equipment to get the job done. The software for the controls was written from scratch to make the gear work with each other and operate to their needs.

"The whole communications infrastructure has been upgraded this year," Miller said.

The biggest challenge, Miller said, was keeping the weight down since the individual components could not be made from scratch by his team.

Between excursions, the Desert RATS participants catalog what they've learned and look at ways to

incorporate changes for the next one, along with passing on changes to other in-depth research programs NASA runs.

The backpack's capabilities are designed with space exploration in mind, but the arrangement may have applications for earthbound explorers, too. Basically, a geologist or other explorer could make a solo trek with the backpack and, on his return, play back the whole trip or selected highlights for those who weren't on the journey.

"Any explorer could use this backpack," Seibert said.



NASA/Frank Michaux

Mike Miller demonstrates one of the backpacks his team designed and built for the Desert Research and Technology Studies project's upcoming field test in Arizona. The backpacks are equipped with GPS antennas, communications components and cameras. They are meant to show researchers what an astronaut might need to explore an alien world and give designers a look at the hardships the equipment could encounter.

## Remembering Our Heritage

# One-two Viking punch tested launch teams

By Kay Grinter  
Reference Librarian

Thirty-five years ago, Viking 2 lifted off from Cape Canaveral on Sept. 9, 1975, with a Mars orbiter and lander aboard, the second successful launch to Mars of the year.

Its sister mission, Viking 1, launched Aug. 20, just 20 days earlier. The launches were planned during Earth/Mars opposition, which occurs about every 26 months.

NASA alum Jack Baltar was the test operations manager for Unmanned Launch Operations (ULO) at the time. The launch readiness of both the Titan-Centaur launch vehicles and Launch Complex-41 from which they launched were his responsibility.

"The short time period between the launches put pressure on the team," Baltar recalled, "but we were up to the challenge."

NASA alum Jim Womack was the chief of ULO's propulsion/mechanical branch and had oversight for the redevelopment of the complex to support Titan-Centaur operations.

"The complex required significant modifications to support the Viking Project," Womack said. "New ground support equipment, including nitrogen gas tanks and electrical provisions for the Centaur stage, had to be installed at the pad, and the transporter was practically rebuilt."

Since the complex had only one pad configured to support the two launches planned in such close proximity, a unique processing approach was implemented.

The vehicle for the second Viking mission was checked out at the pad ahead



NASA file/1975

Technicians inspect the Viking 2 lander in Kennedy Space Center's Spacecraft Assembly and Encapsulation Facility No. 1 in 1975.

of the vehicle designated to launch the first spacecraft. Preparations on the second vehicle were then continued in nearby facilities while the vehicle for the first mission was installed on the pad for its final launch campaign.

NASA alum John Neilon, director of ULO, was launch director for Viking 2. A last-minute technical problem placed the mission in jeopardy. "The signal strength on the spacecraft's S-band telemetry was found to be below specification," Neilon said. "The spacecraft had to be demated, the faulty component replaced and the encapsulated spacecraft remated to the launch vehicle. A new launch date of was decided upon -- Sept. 9 -- the last day of the nominal Viking launch opportunity.

"Despite a threatening bank of thunderstorms ap-

proaching the pad, the space gods prevailed, and Viking 2 lifted off at 2:39 p.m."

Each Viking mission consisted of an orbiter, built in-house at the Jet Propulsion Laboratory in California, and a Martin Marietta-built lander.

The Viking landers would make NASA's first attempts to soft-land on another planet to analyze the surface material. Their primary goal was to determine whether life existed on Mars through on-the-spot biological tests.

Each lander slowed its descent to the Martian surface by deploying a parachute that was discarded at about 3,900 feet. Three radar-controlled liquid-fueled engines then lowered the spacecraft to the ground at a speed between 5 and 11 feet per second.

History was made in 1976 as both landers successfully touched down on the surface of Mars intact. The Viking 1 lander separated from its orbiter and touched down safely at Chryse Planitia on July 20. Its historic first image was transmitted 25 seconds later. The Viking 2 lander followed close behind, touching down Sept. 3 at Utopia Planitia.

Originally designed to function for 90 days, the Viking spacecraft collected data for more than six years. The orbiters took more than 50,000 images, mapping 97 percent of the planet.

The landers took 4,500 close-up images of the Martian surface and more than 3 million weather-related measurements, including the first in situ observations of a global Martian dust storm.

The legacy of the Viking landers continues.

In 2008, experiments from NASA's Phoenix Mars Lander, which arrived on Mars in May of that year, suggest that soil examined by the Viking landers may have contained carbon-based chemical building blocks of life. The data returned by Phoenix also suggest liquid water has interacted with the Martian surface throughout the planet's history and into modern times.

Next up is NASA's Mars Science Laboratory, a rover that will attempt to determine the planet's habitability. Launch is targeted for no earlier than Nov. 25, 2011.

For more on NASA's exploration of the planet Mars and the discoveries made to date, visit <http://mars.jpl.nasa.gov>.





NASA/Jack Pfaller

## Workers replace broken water pipe

On Sept. 10, workers maneuver the replacement section of a 24-inch cast iron water main pipe off of a transport truck in the Launch Complex 39 Turn Basin area, across from the Vehicle Assembly Building. Kennedy was closed to non-essential personnel the morning of Sept. 8 while crews isolated the water main break and restored water to the center.

### Looking up and ahead . . .

Targeted for Oct. 19	Launch/CCAFS: Delta IV Heavy, NROL-32; TBD
No Earlier Than planning date Oct. 23	Launch/CCAFS: Falcon 9, Dragon C1; TBD
Targeted for Nov. 1	Launch/KSC: Discovery, STS-133; 4:40 p.m. EDT
Targeted for Nov. 17	Launch/CCAFS: Atlas V, GPS IIF-2; TBD
Nov. 22	Launch/VAFB: Taurus, Glory; 5:09 a.m. EST
Targeted for Jan. 22, 2011	Launch/CCAFS: Atlas V, SBIRS GEO-1; TBD
Targeted for Feb. 26, 2011	Launch/KSC: Endeavour, STS-134; 4:04 p.m. EST
Aug. 5, 2011	Launch/CCAFS: Atlas V, Juno; TBD
Aug.15, 2011	Launch/Reagan Test Site: Pegasus, NuSTAR; TBD
Sept. 8, 2011	Launch/CCAFS: Delta II Heavy, GRAIL; TBD
Sept. 23, 2011	Launch/VAFS: Delta II, NPP; TBD
To Be Determined	Launch/VAFB: Delta II, Aquarius / SAC-D Satellite; TBD
No Earlier Than Nov. 25, 2011	Launch/CCAFS: Atlas V, Mars Science Laboratory; TBD

### Upcoming events . . .

- Sept. 21** Blood drive in front parking lot of the O&C;  
and **22** For more information, go to [www.floridabloodcenters.org](http://www.floridabloodcenters.org)  
POC: Diane Haider, [dianehaider@nasa.gov](mailto:dianehaider@nasa.gov)
- Sept. 25** KSC Family Day/Take Your Children to Work Day;  
For more information, go to <http://familyday.ksc.nasa.gov>  
POC: Layla Higgins, [layla.m.higgins@nasa.gov](mailto:layla.m.higgins@nasa.gov)



John F. Kennedy Space Center

## Spaceport News

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Managing editor . . . . . Candrea Thomas  
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Copy editor . . . . . Rebecca Sprague

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